ABSTRACT OF THE DISCLOSURE

An assembly for positioning and removably supporting cargo on the exterior of a vehicle, wherein the cargo may be mobile or mounted on a mobile carrier assembly, such as a hand truck. A hoist assembly includes a winch having a supporting cable, a stanchion and a boom adjustably disposable relative to the stanchion all connected to a base which is removably secured to a hitch structure mounted on the vehicle. The support assembly includes a load support portion structured to support the load and/or cargo in a predetermined orientation, which in at least embodiment may be an inclined orientation. Controlled and secure positioning of the cargo relative to the load support portion is facilitated by selectively adjusting the boom relative to the stanchion.